DISSERTATIONS AND THESES IN INSTITUTIONAL REPOSITORIES: CASE STUDY IN JAPAN

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Abstract

This presentation will describe a preliminary survey on the university library policies on theses and dissertations and case studies in Japan. The Japanese policy on higher education sets master's theses and doctoral dissertations as a part of degree requirements. Doctoral dissertations are required to be published in print by the "degree law" in Japan. Two satisfaction methods are common: bounded copies of most dissertations are deposited to the National Diet Library, while some, mostly in humanities, are commertially published as books. Many university libraries hold doctoral dissertations as book materials. Publication of master's theses, however, is not legally required, and it is usually difficult to access them. They are handled as mere documents used to apply for master's degrees at a university, and often counted as personal data. A few university libraries offer them as book material, but in most cases offer them just for browsing. In fact, the dissemination of theses and dissertations has been limited in spite of high demand: printed versions are usually not loaned out, and duplication is allowed only with the author's permission. In 2005, when the National Institute of Informatics shored up the institutional repositories as a component of the cyberscience infrastructure, university libraries in Japan began to deposit and disseminate dissertations in electronic form via the institutional repositories, even though some do not provide them in paper. As a result, a dissertation in the Nagoya University Repository was downloaded more than 800 times in the first 11 months after its deposit. Mie University made a further move to disseminate master's theses as educational outputs both in print and in electronic form under the permission of both the authors and thesis advisors. The results suggest that electronic submission and dissemination of theses and dissertations are to be legally implemented, not merely for coping with limited shelf space, but for enhancement of scholarly communication.

Background and current situation

Degree regulations

The Ministry of Education in Japan, which is currently part of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), issued an ordinance on university degrees (Bachelor, Master's, and Ph.D.) on April 1, 1953 (Last amended on Sep. 2005). It includes regulations on the 'publication in print'; articles 8-9 state that degree-awarding institutions should publish an abstract of the dissertation and the summary of its evaluation within three months; new Ph.D.'s dissertations should be published in print within one year. The articles have a provisory clause:

> However, he or she may, if there exists an unavoidable reason, publish an abstract of the dissertation in print instead of the full-text of the dissertation with the institution's approval. Accordingly, the degree-awarding institution shall provide the full-text of the dissertation for browsing upon request.

Current practices

The current practice concerning dissertations in Japan recognizes the ordinance with the provisionary clause. Degree-awarding institutions publish dissertation abstracts in print; paper copies are sent to other universities; and discarded almost immediately because of limited shelf space. Printed full-text dissertations are not usually

published, although some dissertations (mostly in humanities) are commercially published as books. They are held only in the university awarding the degree and the national diet library, with the condition that no loaning is permitted and photocopying requires the author's permission in advance. Availability is limited.

Reaching dissertation bibliographies

There are several bibliographical resources on dissertations and theses. An online directory of dissertations and theses in Japan (in Japanese, Nagoya University) provides a general overview. Among the online resources, the Academic Research Database (NII) and NDL-OPAC (NDL).

NII's Dissertation bibliography provides bibliographical information on 378,269 dissertations (as of March 29, 2007). It is a component database of the Academic Research Database, which in turn can access files from NII's academic resource portal, called GeNii. The academic resource database consists of 27 databases with 150 million items.

NDL-OPAC (NDL) has the bibliographies of 287,325 dissertations (deposited to NDL since 1984) from among 451,843 dissertations currently held (March 2005). The remaining bibliographies of those dissertations are available in print in the NDL.

National Diet Library (NDL), Japan

All in print publications in Japan are subject to deposit in the NDL, including published dissertations. The NDL Law stipulates that copies of all new publications in Japan must be sent to the NDL under the Legal Deposit System, while deposits can be delayed or even disregarded.

Kansai-kan (Kyoto), (not the main library in Tokyo) holds all the dissertations submitted to Japanese universities since September 1923, which is after the Great Kanto Earthquake. Some were the holdings of its predecessor, the Imperial Library of Japan.

Electronic theses and dissertations (ETD)

Some universities in Japan have published electronic versions of dissertation abstracts or full-texts even before the concept of institutional repository emerged.

An online directory of dissertation bibliographies at Nagoya University registers at least 62 universities that have an online bibliography of dissertations and theses, while only four universities that have full-text dissertations online; and 21 universities that have abstracts.

Most of the full-text electronic dissertations and theses in the digital libraries at the four universities have emerged from the digital library project in the 1990s.

Digital libraries: pilot projects

In particular, those universities which joined pilot projects on digital libraries hold ETD in their digital library system. As of March 2007, Nara Advanced Institute of

Science and Technology (NAIST) has 3,948 ETDs; Tsukuba University (with the former University of Library and Information Science, which is merged with Tsukuba) have 1,100 full-text ETDs and 8,100 metadata; Tokyo Institute of Technology has 1,595 full-text ETDs and 10,751 metadata; and the Japan Institute of Science and Technology (JAIST) hold 380 dissertations and 2073 master's theses. Kyoto University also joined the pilot project, but currently publishes no full-text ETDs; only the dissertation abstract database is publicly available. The approach to ETD, however, had general problems common to general digital libraries in the last decade. Being metadata-oriented, the ETDs in DL did not facilitate the usage of dissertations. The interoperability and user-interface isssues have been considerably improved since then; Institutional repositories (IRs) are now taking on ETD dissemination.

Institutional repositories as a component of cyberscience infrastructure

The National Institute of Informatics (NII) was founded in April 2000 in downtown Tokyo as an inter-university research institute. It not only conducts comprehensive research on informatics, but develops and provides an advanced infrastructure for disseminating scholarly information. Its cyberscience infrastructure (CSI) initiative aims at providing industrial and social contributions as well as international cooperation on scientific research. The initiative includes the following projects:

– SINET. NII provides a 100M network infrastructure shared among academic institutions in Japan.
– NAREGI. NII promotes a research grid middleware to enhance supercomputing in scientific research.
– UPKI. NII collaborates with universities to construct an interuniversity public key infrastructure.
– Next-generation content services. An infrastructure for scholarly information resources is under construction on the basis of existing scholarly content services that were established by a collaboration between NII and universities.

Thus, NII serves as an academic infrastructure for all Japanese universities as well as international institutes. There were 726 universities involved in Japan (87 national universities, 86 municipal universities, 553 private universities, and 4 private correspondence education colleges) as of the academic year 2005. Their backgrounds are diverse and the network and library systems are not uniform. Nevertheless, NII stepped forward to serve many of the universities as quickly as possible.

Institutional repositories in Japan

An institutional repository (IR) is placed in the CSI initiative as an indispensable component of the next-generation content services in 2005 as well as the network components of super-high speed networks, grids, and university PKI middleware. Nineteen universities worked together with NII in a pilot project under the CSI framework to implement IRs. By June 2006, 17 institutional repositories were running.

These repositories hold a total of 62,423 items (as of June 28, 2006). For the detailed information up to October 2006, see Murakami and Adachi (2006)

In 2006-2007, a full-scale project was started, and 57 universities were selected from 77 applications to join the project to operate IRs; 30 universities among them also carried out 22 research and development projects on the smooth operation of Irs, and the details also appear in Murakami-Adachi (2006). Forty IRs are running in Japan as of April 2007.

Interim report: March 2007

As of mid-February 2007, an interim evaluation was carried out. The partner universities submitted reports on February 20, 2007. There were 37 IRs running in Japan, accumulating more than 281,000 items. For the details of the method and a summary of the results, see Murakami-Tutiya-Sato (2007). This report focuses on the ETD issue.

Twenty-eight universities have prepared e-theses for the IR. Metadata descriptions were documented in Hokkaido University. In the academic year 2006, 4,469 full-text dissertations, 15,566 dissertation abstracts, and 370 evaluation summaries of dissertations were prepared for IRs.

For 2007, 11,752 full-text dissertations, 29,870 dissertation abstracts, 900 dissertation evaluation summaries, and 10 master's theses are planned for IRs.

Researcher survey on ETD needs by Hokkaido University

The Hokkaido University Library (2007) conducted a researcher survey on electronic dissertations in Jan 2007. The survey also had a marketing purpose; a agreement form to deposit his/her dissertation was attached to the questionnaire.

There were 794 responses from among 2,150 questionnaires sent, a responce rate of 36.9%. No big difference by positions existed in the responce rate.

The results generally were positive on ETD. 73.4% were positive on the possibility of other researchers reading dissertations, 85.1% agreed to have his/her own dissertation read by others, and 78.3% were positive about electronic publication of dissertation. 46.5% were positive about institutionalization (country, university, or departmental level), 57.6% wanted to have his/her own dissertation on HUSCAP, the IR in Hokkaido University, and in particular, 63.7% in STM were positive, while 56% in humanities and social science were negative. The last result may reflect that most faculty members in humanities and social science in Japan, mostly in the senior level, do not have Ph.Ds.

Case studies

Hiroshima University

Librarians have offered individual briefings to the heads of nine schools to ask for dissertation deposits to IRs. They processed copyrights and digitizations, and deposits; 64 deposits out of 182 inquiries. They also carried out inquests of contact addresses who got degrees (in education, psychology, general science, and engineering) in the past five years.

Tsukuba University

Librarians have offered individual briefings by the dean of the university library to the heads of seven schools and carried out inquiries into past Ph.D.s. Promotion campaigns for dissertations and thesis deposits were held at commencements. Information brochures and deposit agreement forms were delivered on dissertation submissions. As a result, 160 full-text (20%) dissertations were deposited as of February 2007.

Nagoya University

Librarians supported the formation of a researcher community, whose members are mostly the initial depositers to its IR. Seventy-six members have joined as of Feb 2007. Institutionalization of the dissertation deposits are ongoing. Schools of Informatics, international development, and engineering regulate the submission of dissertations both in print and on electronic forms. Other schools will soon follow. So far, 312 past dissertations have been deposited. A considerable example of the validity of this is that a dissertation in the Nagoya University Repository was downloaded more than 800 times in the first 11 months after its deposit. In March 2007, NDLTD started harvesting the metadata of dissertations in Nagoya University.

Master's theses

Unlike doctoral dissertations, there is no regulations on master's theses in Japan. Consequently, it is more difficult to access master's theses. Often theses are taken as mere documents or even personal data. A few university libraries accept them as book material, but in most cases offer them just for browsing. The status of master's theses are discussed in the institutional repositories community, and each university has a different opinion.

Mie University

Mie University regards master's theses as educational outputs. It decided to disseminate theses in both print and on electronic forms under permission from both authors and thesis advisors.

Summary

NDL and the associations of university libraries discuss the possibility of amending the degree regulations to accept (or even mandate) the electronic deposit of

dissertations (Spring 2007-). The latest updates will be included in the presentation material.

ETD will be a substential part of the IR contents in the next few years in Japan as well as in the other countries. Dissertations in Japan will be deposited both in paper and on electronic forms to each degree-awarding institution and NDL, when the degree regulations are updated and each academic institution implements the electronic submission of theses and dissertations. The use of theses and dissertations will become easier, because they will be searchable and downloadable. ETD will not have to cope with limited shelf space and they will enhance scholarly communication.

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